

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-079221

(43)Date of publication of application : 12.03.1992

(51)Int.Cl.

H01L 21/304

(21)Application number : 02-192712

(71)Applicant : SEIKO EPSON CORP

(22)Date of filing : 20.07.1990

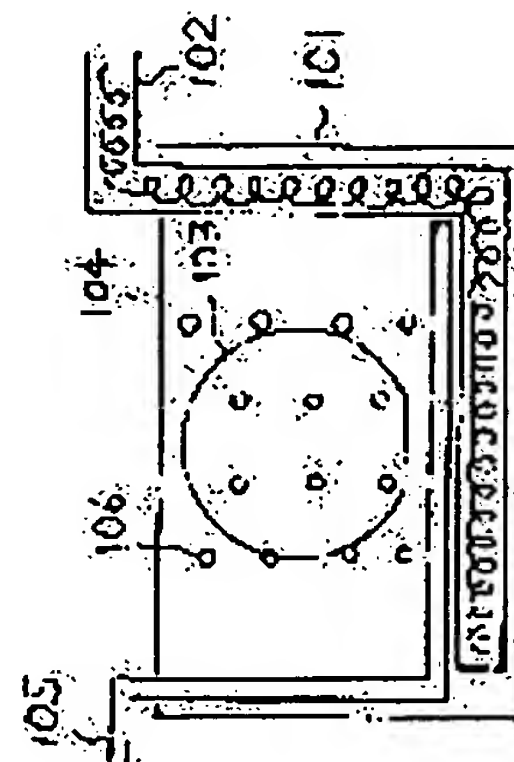
(72)Inventor : HAGITA MASAFUMI

## (54) MANUFACTURE OF SEMICONDUCTOR DEVICE

### (57)Abstract:

**PURPOSE:** To reduce cost, to improve producibility and to stabilize quality of a semiconductor device by cleaning a substrate surface while adding gas containing ozone to ammonia water solution.

**CONSTITUTION:** Mixture solution 104 of aqueous ammonia and pure water is heated by a heater 102 in a chemical solution tank 101. Gas containing ozone such as mixture gas 106 of ozone and oxygen is let out of a tube 105 which is introduced below the chemical tank 101 and is made to impinge on the surface of an Si substrate 103 for cleaning.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]